In The Claims:

4. (original) Apparatus for detecting an alignment mark on a semiconductor body, such alignment mark, such alignment mark comprising a pair of sets of parallel lines disposed on the semiconductor body, the parallel lines in one of the sets being disposed orthogonal to the parallel lines in the other one of the set, the two sets of parallel lines being in an overlaying relationship, such apparatus comprising:

an optical system for scanning an alignment illumination comprising a pair of orthogonal, lines of impinging light over the surface of the alignment mark, one of such pair of impinging light lines being orthogonal to, and laterally displaced from, the other one of such pair of impinging light lines, impinging light being reflected by the alignment lines in the surface of the semiconductor when such impinging light is over to provide a pair of laterally displaced beams of reflected light; and

a pair of laterally spaced detectors, each one of the detectors being positioned to detect a corresponding one of the laterally displaced beams of reflected light.